

## Claims:

1. Method for curtain coating a moving web (8) with at least one coating solution, a lateral flow liquid (10) being supplied in a groove (13), perpendicular to the lateral extension of the curtain, on the lateral guides (7) having lower ends (14), which stabilize the curtain on both sides, wherein the total amount of the coating solution and the total amount of the lateral flow liquid are coated onto the moving web (8).  
5
2. Method for curtain coating a moving web (8) according to Claim 1, wherein the lateral flow liquid (10) is not separated from the coating liquid before both impinge on the moving web (8).  
10
3. Method for curtain coating a moving web (8) according to Claim 1, wherein the distance between the lower end (14) of the lateral guides (7) and the moving web (8) is from 0.05 mm to 3 mm.  
15
4. Method for curtain coating a moving web (8) according to Claim 1, wherein the distance between the lower end (14) of the lateral guides (7) and the moving web (8) is from 0.4 mm to 1.5 mm.  
20
5. Device for carrying out the method according to Claim 1, comprising two lateral guides (7) for the curtain (6), exit slits (12) above the lateral guides to supply the lateral flow liquid (10) perpendicular to the lateral extension of the curtain in a groove (13) and with a lower end (14) having a downward protruding edge whose side facing the curtain forms an angle  $\beta$  with the horizontal line and the two sides of the downwards protruding edge include an angle  $\alpha$ , wherein the groove has a rough surface structure.  
25
6. Device according to Claim 5, wherein the width of the groove (13) is from 4 mm to 15 mm.  
30
7. Device according to Claim 5, wherein the width of the groove (13) is from 6 mm to 8 mm.  
35

8. Device according to Claim 5, wherein the angle  $\alpha$  between the two sides of the downwards protruding edge at the lower end (14) of the edge guide (7) is from 0° to 90°.
- 5 9. Device according to Claim 5, wherein the angle  $\alpha$  between the two sides of the downwards protruding edge at the lower end (14) of the edge guide (7) is from 10° to 60°.
- 10 10. Device according to Claim 5, wherein the angle  $\beta$  between the horizontal line and the side of the protruding edge facing the curtain at the lower end (14) of the edge guide (7) is from 0° to 90°.
- 15 11. Device according to Claim 5, wherein the angle  $\beta$  between the horizontal line and the side of the protruding edge facing the curtain at the lower end (14) of the edge guide (7) is from 30° to 90°.
- 20 12. Device according to Claim 5, wherein the underside of the lower end (14) of the edge guide (7) has a hydrophobic surface with a free surface energy from 10 mNm to 60 mNm.
- 25 13. Device according to Claim 5, wherein the underside of the lower end (14) of the edge guide (7) has a hydrophobic surface with a free surface energy from 20 mNm to 45 mNm.
- 30 14. Device according to Claim 13, wherein the surface of the underside of the lower end (14) of the lateral guide (7) is coated with Teflon.
15. Device according to Claim 5, wherein the surface of the groove has incorporated channels arranged in the direction of the falling curtain.
- 35 16. Device according to Claim 15, wherein the incorporated channels at the surface of the groove (13) have a sinusoidal, triangular or rectangular profile or a mixture of these profiles.
17. Device according to Claim 15, wherein the distance between the channels is from 10  $\mu\text{m}$  to 1000  $\mu\text{m}$  and the depth of the channels is from 1  $\mu\text{m}$  to 500  $\mu\text{m}$ .

18. Device according to Claim 15, wherein the distance between the channels is from 100  $\mu\text{m}$  to 250  $\mu\text{m}$ , and the depth of the channels is from 30  $\mu\text{m}$  to 100  $\mu\text{m}$ .

5

10

15

20

25

30